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BEFORE THE BOARD OF PATENT APPEALS AND INTERFERENCES

Application Number: 10/021,249
Filing Date: December 19, 2001
Appellant(s): TRACHTMAN ET AL.

John T. Haran
For Appellant

EXAMINER'S ANSWER

This is in response to the appeal brief filed on 3-20-2007 appealing from the Office action mailed 10-05-2006.

(1) Real Party in Interest

The statement identifying the real party of interest is contained in the brief.

(2) Related Appeals and Interferences

The examiner is not aware of any related appeals, interferences, or judicial proceedings which will directly affect or be directly affected by or have a bearing on the Board's decision in the pending appeal.

(3) Status of Claims

The statement of the status of claims contained in the brief is correct.

(4) Status of Amendments After Final

The appellant's statement of the status of amendments after final rejection contained in the brief is correct.

(5) Summary of Claimed Subject Matter

The summary of claimed subject matter contained in the brief is correct.

(6) Grounds of Rejection to be Reviewed on Appeal

The appellant's statement of the grounds of rejection to be reviewed on appeal is correct.

(7) Claims Appendix

The copy of the appealed claims contained in the Appendix to the brief is correct.

(8) Evidence Relied Upon

6,741,841	Mitchell	5/2004
6,522,865	Otten	2/2003

(9) Grounds of Rejection

The following ground(s) of rejection are applicable to the appealed claims:

Claim Rejections - 35 USC § 103

1. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

2. Claims 1, 3-10, 11-19, 20-21, 23-24 rejected under 35 U.S.C. 103(a) as being unpatentable over Mitchell (US PAT: 6,741,841, filed 1-28-2000) in view of Otten (US PAT: 6,522,865, filed 4-10-1999).

Regarding claim 1, Mitchell discloses apparatus for receiving signals transmitted by satellite including: an antenna (411, fig. 13) for receiving signals, a demodulator in (264, fig. 11) connected to the antenna, for demodulating one or more communication channels among the signals (col. 23 lines 28-34), and a broadcast demodulator in (450, fig. 13), separate from the communications demodulator and connected to the antenna for demodulating one or more broadcast channels among the signals (col. 25 lines 11-27), wherein one or more communication channels are separate in frequency from the broadcast channels, and apparatus further including a frequency splitter (460, fig. 13) for the communication channels and the broadcast channels, directing the separated

communications channels to the communications demodulator, and directing the separated broadcast channels to the broadcast demodulator (col. 25 lines 57-66).

Regarding claim 11, Mitchell discloses a system for providing broadcasts to aircraft comprising: transmitting means broadcast signals in a broadcast channel to an aircraft, receiving means (411, fig. 13) receiving the broadcast signals on aircraft and decoding means (reads on splitter 460, fig. 13) decoding the broadcast signals, in which the transmitting means and receiving means additionally transmit and receive communication signals in a separate channel, wherein decoding means further acts to direct broadcast signals and separated communication signals to a broadcast signal demodulator (col. 25 lines 11-26) and a communication signals demodulator (col. 23 lines 28-34, col. 25 lines 57-66).

Regarding claim 20, Mitchell discloses an apparatus for receiving real-time broadcast on aircraft, the apparatus comprising: decoding means for separating broadcast data from other data contained within a signal received on-board the aircraft, in which broadcast data comprises a signal allocated a frequency sub-band separate from the frequency sub-band allocated to the signal comprising the other data, wherein the decoding means (reads on splitter 460, fig. 13, col. 25 lines 57-66) is operable to process data relating to the broadcast from the other data by the splitting the signal received on board the aircraft into signals in the respective frequency sub-bands, and decoding means is further operable to direct signals in respective frequency sub-bands to respective demodulator (col. 23 lines 28-34; col. 25 lines 11-27).

Regarding claim 21, Mitchell discloses a method of providing real-time broadcasts to aircraft comprising the steps of: transmitting a signal via a satellite (for example 418, fig. 13; 240, fig. 11), to an aircraft, the signals including communications data and broadcast data, wherein the communication data is separate in frequency from the broadcast data, receiving the signals on board the aircraft, processing the separated broadcast data so as to distribute the broadcast on board the aircraft (col. 23 lines 28-34; col. 25 lines 11-27).

Mitchell differs from claimed invention in that although he discloses decoding means such as splitter (460, col. 25 lines 57-66), he does not specifically teach decoding means such as splitter for separating the communication channels and the broadcast channels.

However, Otten discloses a hybrid satellite communication system which teaches the following: decoding means such as splitter for separating the communication channels and the broadcast channels (fig. 6, col. 8 lines 6-14).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Mitchell's system to provide for the following: decoding means such as splitter for separating the separating the communication channels and the broadcast channels as this arrangement would facilitate to separate the signals so that they can be further processed in separate devices as taught by Otten.

Regarding claims 3-10, 11-19, 23-24, Mitchell further teaches the following: antenna is a directional antenna, the apparatus including means for steering the antenna to point towards a signal source according to a property of one or more

communication channels demodulated by the communication demodulator, property is signal strength of the one or communication channels (col. 24 lines 55-64), communication modulator (274, fig. 12) connected to the antenna for receiving and modulating communication signals received from one or more communication terminals (for example 272, fig. 11) and transmitting modulated communication signals through the antenna (col. 24 lines 25-39), at least one of the communication terminals is broadcast control terminal for transmitting broadcast control signals so as to control content of the broadcast channels (col. 25 lines 43-56), decoding the one or more communication channels and distributing the decoded communication channels to the one or more communication terminals (col. 23 lines 28-34), decoding the demodulated one or more broadcast channels and distributing the one or more broadcast channels to one or more broadcast servers (col. 15 lines 1-26), antenna (261, fig. 12; 411, fig. 13) is a satellite communication antenna, an aircraft including apparatus according to claim 1 (figs. 11-13), broadcast channel is capable of multiplexing one ot more broadcast programs and control information, broadcast programs include one or more real time television broadcasts, internet broadcasts, real time audio broadcasts, multimedia broadcasts, internet broadcasts , recorded television and audio broadcasts (col. 25 lines 11-56; fig. 9), broadcast channels are allocated a radio frequency sub-band which is separate from the radio frequency sub-band allocated to the communication channels (col. 25 lines 57-66; col. 23 lines 28-34; col. 25 lines 21-27), receiving means comprises an antenna which is steerable and transmitting means is a satellite forming part of a constellation of satellites (col. 25 lines 1-10 and fig. 3), communication subsystem for

receiving and transmitting communications signals in the communication channels, the communication subsystem including control means for controlling antenna, control means is operable to move the antenna to point at a predetermined satellite, (col. 24, line 55 – col. 25, line 10), control means is further operable to switch between satellites when aircraft passes from one satellite coverage area to another (col. 4, line 62-col. 5, line 6), broadcast subsystem is separate from the communication subsystem and in which the broadcast subsystem processes the signal received from decoding means and relays the signal to reproduction means for reproducing signals on the aircraft, means for decoding the one or more communication channels and distributing the decoded communication channels to the one or more terminals (col. 25 lines 57-66; col. 23 lines 28-34; col. 25 lines 43-56).

(10) Response to Argument

Examiner's response to Appellants Arguments under item A:

Appellant alleges that "The examiner combination of the Mitchell patent and Otten paten is improper. The examiner has failed to establish a *prima facie* case of obviousness based upon these references". Appellant then proceeds to quote various case laws and criteria to establish a *prima facie* case of obviousness such as there must be some suggestion or motivation, either in the references themselves or in the knowledge generally available to one of ordinary skill in the art, to modify the reference or to combine references teachings. Second there must be a reasonable expectation of success. Finally, the prior art reference (or references when combined) must teach or suggest all claim limitations. The teachings or suggestion to make the claimed

combination and reasonable expectation of success must both be found in the prior art and must not based on applicant's disclosure.

Regarding this, as set forth in the office action dated 10-05-2006, Examiner has clearly set forth the reasons for combination and motivation to combine Mitchell reference with Otten reference to reject Appellants claims. For example Office action dated 10-05-2006 clearly sets forth the rejection of claims as follows: Mitchell differs from claimed invention in that although he discloses decoding means such as splitter (460, col. 25 lines 57-66), he does not specifically teach decoding means such as splitter for separating the communication channels and the broadcast channels.

However, Otten discloses a hybrid satellite communication system which teaches the following: decoding means such as splitter for separating the communication channels and the broadcast channels (fig. 6, col. 8 lines 6-14).

Thus, it would have been obvious to one of ordinary skill in the art at the time invention was made to modify Mitchell's system to provide for the following: decoding means such as splitter for separating the communication channels and the broadcast channels as this arrangement would facilitate to separate the signals so that they can be further processed in separate devices as taught by Otten.

In light of this, Examiner submits that examiner has made a *prima facie* case of obviousness rejection of appellants claims by not only giving reasons for combination and also motivation to combine the references.

As to Appellants other argument such as reasonable expectation of success of combination is pure speculation as Appellant does not give any reasons for combination

to be not successful other than speculating it. Besides examiner has set forth clear reason or motivation to combine the references as stated in the office action such as separating the signals such as broadcast signals and communication signals so that they can be processed by separate devices as taught by Otten (col. 8 lines 6-14).

As to Appellants another argument that motivation to combine the references is based on Appellants disclosure or hindsight: In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Examiner's response to Appellants Arguments under item B:

Claim 1 recites an apparatus that includes a frequency splitter for separating the communication channels from broadcast channels. Regarding this limitation, the primary reference Mitchell, although it teaches decoding means such as splitter (460, fig. 13, col. 25 lines 57-66), does not specifically teach it separates communication channels and broadcast channels. However, Otten discloses hybrid satellite communication system which teaches decoding means such as splitter in DBS receiver (50, fig. 6) for separating communication channels and the broadcast channels (fig. 6, col. 8 lines 6-14). Thus, it would have been obvious to one of ordinary skill in the art at

the trime invention was made to modify Mochell's system to provide for decoding means such as splitter for separating communication channels and broadcast channels in order to facilitate to separate the signals so that they can be further processed in separate devices as taught by Otten.

Regarding this rejection, Appellant alleges that "the examiner provides no suggestion or motivation other than impermissible hindsight based on Applicant's disclosure, to modify the system disclosed in the Michell to arrive at the claimed invention". Regarding this as can be seen from the above rejection of claim 1, the examiner has clearly provided motivation to combine the references as suggested by Otten such as separating communication channels and broadcast channels in order to facilitate to separate the signals so that they can be further processed in separate devices, which Appellant's have failed to acknowledge.

As to appellant's other argument that rejection is based on Appellant's disclosure: In response to applicant's argument that the examiner's conclusion of obviousness is based upon improper hindsight reasoning, it must be recognized that any judgment on obviousness is in a sense necessarily a reconstruction based upon hindsight reasoning. But so long as it takes into account only knowledge which was within the level of ordinary skill at the time the claimed invention was made, and does not include knowledge gleaned only from the applicant's disclosure, such a reconstruction is proper. See *In re McLaughlin*, 443 F.2d 1392, 170 USPQ 209 (CCPA 1971).

Appellant further refers to Mitchell reference and states that "splitter disclosed in Mitchell patent does not separate television programming signals. Rather, Mitchell patent discloses that the same signal present at all outputs of the splitter. The examiner alleges that it would have been obvious to one of ordinary skill in the art to modify the Mitchell patent's system to include a splitter of the type disclosed by Otten patent. However, the Examiner has provided no suggestion or motivation other than impermissible hindsight based on Applicant's disclosure to modify the system disclosed in the Mitchell patent to arrive at the claimed invention". Regarding this, as can be seen from this, Appellant is repeating the same arguments as above. Examiner respectfully submits that Examiner response provided above is applicable.

Appellant further refers to Mitchell reference and states that it does not acknowledge any problem in its system and provides no motivation to modify the Mitchell. Appellant further speculates that "it is not even apparent that the Otten patent's splitter would be compatible with Mitchell patent's system. Given that neither reference discloses how television signals are combined with Internet signals, and the wide range of possibilities available (for example, frequency division multiple access, spread spectrum multiple access, or time division multiple access) one cannot assume that the Otten's patent splitter would have been capable of separating the signals in the Mitchell patent's system. In addition, ... Further Otten patent discloses a splitter that is capable of separating television signals from Internet signals (see colum 8, lines 6 to 14), but does not discloses that this is frequency splitter or that television signals are separate from internet signals. Thus, Otten patent does not explicitly or implicitly

discloses that the splitter is frequency splitter (i.e. a splitter that is capable of separating television signals from Internet signals according to respective frequencies). The Otten patent's splitter might equally use some other means to separate signals, such as spread spectrum multiple access or time division multiple access. Thus, even if the skilled ... he would not inevitably have arrived at a system comprising a frequency splitter as defined by the claims". Regarding this, Appellant is alleging that splitter in Otten's system is not frequency splitter separating television signals from internet signals according to respective frequencies. But splitter as well known in the art is used to separate frequency signals into different frequency bands. To further clarify definition of splitter: NEWTON'S TELECOM DICTIONARY gives the following definition for splitting: A filter which splits or separates signals on the basis of their transmission frequency. For example, a splitter can be incorporated into an ATU-R (ADSL Termination Unit-Remote) located at a subscriber premise. The splitter would serve to separate high-frequency data transmission from low frequency POTS voice transmission. The data transmission would then be delivered to TV set or PC while the POTS transmission would be delivered to the telephones. From this, Appellant speculation about the function of splitter in Otten reference should be laid to rest. And Otten's splitter is definitely separating the received communication signal into different frequency signals such as separate TV signals and internet signals (col. 8 lines 6-14). Therefore, Otten reads on Applicant's claimed splitter to separate signals into communication channels and the broadcast channels. Therefore, the combination of Mitchaell and Otten teaches Applicant's claim limitations of claim 1.

Regarding rejection of dependent claims 3-10, 23, and 24, Appellants arguments are tied to independent claim 1 being patentable which is not as explained above.

Examiner's response to Appellants Arguments under item C:

Regarding rejection of independent claim 11, Appellant pretty much repeats the same arguments as made under item B above regarding combination of Michatel and Otten and motivation to combine the references. Examiner respectfully submits that response made to Appellant's arguments with respect to rejection of independent claim 1 under item B is applicable to rejection of independent claim 11 too.

Regarding rejection of dependent claims 12-19, Appellant arguments are tied to independent claim 11 being patentable which is not as explained above.

Examiner's response to Appellants Arguments under item D:

Claim 20 recites among other things, decoding means for separating broadcast data from other data contained within a signal received on-board the aircraft. As set forth in office action rejecting claim 20, the primary reference Michell, although it teaches decoding means such as splitter (460, fig. 13, col. 25 lines 57-66), he does not specifically teach decoding means for separating broadcast data from other data contained within a signal received on-board the aircraft. However, Otten discloses hybrid satellite communication system which teaches decoding means such as splitter in DBS reciver (50, fig. 6) for separating communication channels and the broadcast channels (fig. 6, col. 8 lines 6-14). Thus, it would have been obvious to one of ordinary skill in the art at the trime invention was made to modify Mochell's system to provide for decoding means such as splitter for separating or decoding means for separating

broadcast data from other data contained within a signal received on-board the aircraft in order to facilitate to separate the signals so that they can be further processed in separate devices as taught by Otten.

Examiner's response to Appellants Arguments under item E:

Regarding rejection of independent claim 21, Appellant pretty much repeats the same arguments as made under item B above regarding the combination of Mitchell and Otten references and motivation to combine the references. Examiner respectfully submits that response made to Appellants arguments with respect to the rejection of claim 1 under item B is applicable to rejection of claim 21 too.

(11) Related Proceeding(s) Appendix

No decision rendered by a court or the Board is identified by the examiner in the Related Appeals and Interferences section of this examiner's answer.

For the above reasons, it is believed that the rejections should be sustained.

Respectfully submitted,

Conferees:

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AB

APPLICANTS

Eyal Trachtman, London, UNITED KINGDOM;
Johnny Nemes, London, UNITED KINGDOM;

** CONTINUING DATA ********** None NRH

** FOREIGN APPLICATIONS ********** yes NRH

UNITED KINGDOM 0031323.9 12/21/2000

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Foreign Priority claimed	STATE OR COUNTRY	SHEETS DRAWING	TOTAL CLAIMS	INDEPENDENT CLAIMS
☑ yes ☐ no	UNITED KINGDOM	4	23	4

35 USC 119 (a-d) conditions ☐ yes ☐ no ☐ Met after Allowance

Verified and Acknowledged Examiner's Signature Initials

ADDRESS

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TITLE

System and method for providing broadcast signals to aircraft

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